

38
#21
An inaugural essay on Cynanche Trachealis.
submitted to the provost and faculty
of the
Pennsylvania medical college
for
the degree of M.D.
by
Lewis B Lane
of
North Carolina

Philadelphia

November 29, 1821

admitted March 16th 1822

Y

Received of the Treasurer of the
County of ... the sum of ...

for ...

the sum of ...

...

...

...

...

...

...

...

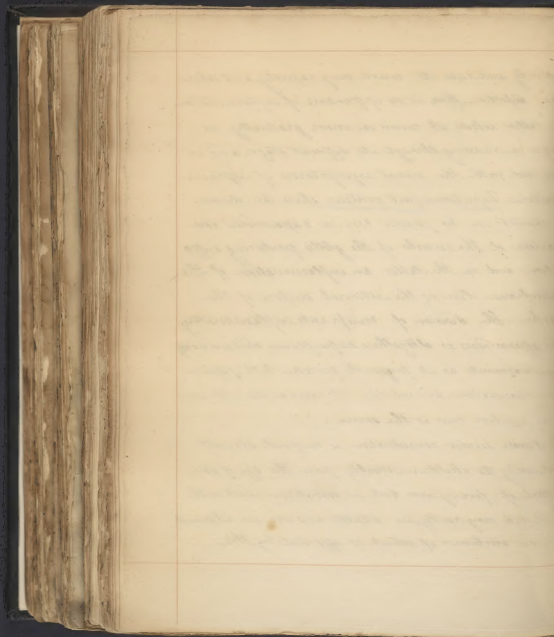
...

An inaugural essay on *Cynanche Trachealis*.

The name by which this disease is known among the vulgar is Hoarseness, supposed to be a corruption of the word Heaves, from the manner in which a patient labouring under it, Heaves his chest in breathing. It has received, by authors, various names, such as suppurative stridula, cynanche trachealis, tracheitis, a pleurisy of the windpipe &c. This is one of the diseases of the respiratory system, according to the nomenclature adopted by professor Chapman. It was described by Dr. Hume, a professor at Edinburgh, as a new disease and consequently secured to himself all the honour of having first described and brought into notice this formidable disease; but professor Chapman strips him of this honour by proving that it was described by an earlier writer. Dr. Hume's description of it was written about the middle of the ^{18th} century. ✓
Cynanche Trachealis is divided into spasmodic and inflammatory; the former when it attacks very

suddenly and runs its course very rapidly, and when upon dissection, there is no appearance of inflammation. The latter, when it comes on more gradually, is longer in running through its different stages, and is attended with the usual symptoms of inflammation. Dyspnoea, post mortem, shew this disease to consist in the former case, in a spasmodic contraction of the muscles of the glottis producing suffocation; and in the latter an inflammation of the membrane lining the internal surface of the trachea. The division of croup into inflammatory and spasmodic is altogether superfluous and unnecessary, inasmuch as it frequently partakes both of spasm and inflammation, and whether it does or not the treatment in both cases is the same.

The disease under consideration is confined almost exclusively to children, mostly from the age of one to that of five years; but we sometimes meet with it, though very rarely, in adults, and even in advanced age; an instance of which is afforded by the



Illustrations Washington who died of this disease.

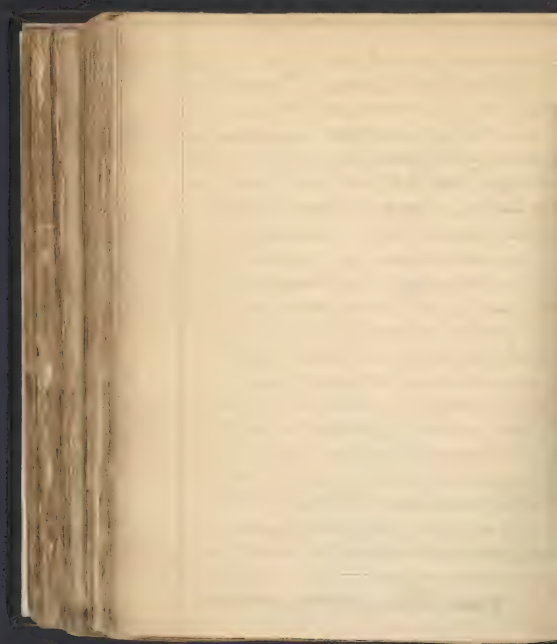
I come now to the cause of this disease; and here I will say a few words against the idea of its specific and contagious nature. The advocates of this opinion say, that if it were not of a specific nature and entirely different from what we conceive to be its most frequent cause, a common catarrh, we should frequently find membranes formed on the internal surface of the trachea in consequence of slight catarrhal affections. Now, to confute this argument, I presume it will only be necessary to prove, that that species of inflammation which results in the formation of a membrane or a solid body, by an effusion of coagulable lymph, is not confined to the trachea; and to this end we have the authority of Dr Scarpa who has proven that the membrana decidua, the membranes on the internal surface of the pleura and intestines are dependent upon the same process; and I have seen one formed in the urethra by

the inflammation of that passage, consequent to
the application of a blister. The usual causes of this
disease are cold and dampness, particularly when
combined, sudden changes of weather &c. Hence its
more frequent occurrence in winter than in summer,
in northern than in southern latitudes. It is said by
some to be occasionally ^{also} epidemic. It is likewise said
to be endemic to some places.

The precursory signs, of an attack of croup, are
stupidity and insensibility, hoarseness and suffused eyes,
and these symptoms are accompanied with a cough
of a peculiar sound, compared, by authors, to the
barking of a wild dog. Shortly after the appearance
of these symptoms, the patient is attacked
with a shivering succeeded by flushings of heat, sim-
ilar to an attack of common synocha. Now
all the symptoms become very much aggravated,
respiration is performed with the utmost difficulty, atten-
ded with a shrill sound during inspiration as if the
passage of the trachea were straitened and very

much contracted, the countenance is suffused and
wild, and the patient throws back his head to pre-
vent immediate suffocation. There is sometimes a
considerable degree of nausea and vomiting in the
first stage of the disease. The pulse is strong and
quick with much febrile heat. We are however
not always favoured with the pulmonary signs
above enumerated, so warm us of signifying an
onset but on the contrary it sometimes makes its
attack suddenly and in the night the patient a-
waking, afflicted with all the symptoms above mention-
ed. When this is the case the most violent symptoms
sometimes remit during the day and recur again
at night to the disease advances the symptoms be-
come more and more urgent, and if no relief
be not obtained, suffocation closes the scene.
Croup may be distinguished from acute pneumonia
to which it bears, in some of its phenomena
hence, by the following diagnostics. The former is
attended with a frequent strict cough, or rather the

* vide Thomas's practice of Physic



either there is little or no cough; or cough there is not
the any remission, in asthma it is one of the most
prominent symptoms, and it is generally attended
with some evacuations, as purging, vomiting, eructation.
In case, the pulse is frequent and strong with much
febrile heat, and the voice is small and shrill;
in some the pulse may, perhaps, be equally quick
but not so full, and the voice is deep and hoarse.
On the first appearance of the pericardiac symp-
toms an active emetic will frequently check the further
progress of the disease, and if it does not arrest it at
once, it greatly lessens the violence of its subsequent stage.
But if the emetic should not have the desired effect,
we should abstract blood from the arm, and if this
be impracticable as is sometimes the case in very young
subjects, we may open a vein in any other part of
the body where it is most convenient, from which
a sufficient quantity of blood may be taken, we
should at the same time repeat the emetic, and
here I will observe, that in consequence of the great



mobility of the stomach in this disease, the emetic
medicine, which should be ~~tax~~ ^{not}, should be given
in very large quantities and often repeated, until
it vomits actively, which may be very much pro-
moted by placing the patient in a warm bath.
After the medicine has operated actively, it will gene-
rally be found that the disease has given way. But should
the attack still remain violent, it will be necessary
to place the patient in a warm bath and bleed
ad delirium animi. When pushed to this extent, it
is said, the heart never fails. The general bleeding has
been carried as far as may be advisable, we must resort
to topical bleeding with cups and leeches and the
application of a large blister to the throat, reaching
from one ear to the other. At this stage of the disease,
mercury (in other words, calomel) should be given in
large and frequently repeated doses or with indu-
active purging. This is a remedy of very great
importance in completing and establishing the
cure. So highly is it esteemed by the venerable



professor of anatomy in this institution, that he
placed his principal reliance for the cure of this dis-
ease on venous bleeding and purging actively with
calomel. He has been known to bleed a child of
three months old, 3 three times in a day, and to
administer to the same patient thirty grains of
calomel in the same length of time, by which
means the child was saved. In all inflammatory
diseases, bleeding should be carried to such an extent
as to produce direct and immediate effects. The
modus operandi of moderate and venous bleeding
is very different. The former merely reduces pulse
action without making any material impression
upon the disease itself. Whereas profuse bleeding
breaks down and subverts the diseased action at
once. Neither is such profuse bleeding, if carried only
to the extent which is required for the suppres-
sion of the disease, so debilitating as frequent and
moderate bleeding.

When an attack of erysipelas is permitted to run on



unrestrained, for a considerable length of time, the
inflammation descends into the bronchæ and lungs,
producing pneumonia rather the treatment of
which I shall not detail.

It has likewise another termination as an
effusion of coagulated lymph on the internal sur-
face of the lœcina, which, by the evaporation of
the more fluid parts assumes a solid, firm and
receives the name of membrane. This membrane
is sometimes expectorated, but it most frequently
remains for some time, adherent to the lœcina, and
at length getting loose, when the patient is too far
exhausted to throw it up, produces suffocation.
But if the treatment above recommended be vigor-
ously pursued, a membrane will seldom or never
form. Sometimes, when it has formed, we should, by
every means in our power, promote its discharge.
For this purpose we may give a decoction of the polyga-
la senega, and perhaps its virtue might be increased
by the addition of an equal quantity of squills.



The seneka may also be used in substance reduced to powder
with equal sugar. The credit of having first discov-
ered the utility of the seneka in this stage of croup, is
accorded to Dr. Archer of Maryland. He first used it
in decoctions but subsequently in powder. The strength

the decoction must be determined by the physi-
cian. It should be made as strong as to produce in taking
a considerable degree of irritation about the fauces and
a desire to cough, when taken into the mouth. This
sign of strength is rendered necessary by the increased
size of the larynx, and in fact of the entire body.
Half an ounce of the root bruised and boiled in a close
vessel with half a pint of water, down to four ounces,
will in most cases be sufficiently strong. If this a tea
spoon full should be given every hour or half hour
as an urgency of the case may demand, and during the
interval a few drops should be given occasionally so as
to keep up a constant effect upon the throat. This should
be continued until vomiting and purging are induced;
it should then be given in small quantities until the



membrane is discharged, which sometimes takes place in the
course of a few hours

During the last stage of croup when a cough is the most
urgent symptom, a few drops of laudanum may be
given with advantage. It allays the cough and quiet
the irritation about the larynx. It should be given in
a little flax seed tea or some other mucilaginous drink.
During convalescence, the patient should be extremely
cautious of the least exposure to cold, dampness or
irregularity of diet, for he is very subject to a relapse.
In those cases where a membrane has formed, and all
our attempts to remove it, prove abortive, Dr. Physick
has proposed, as a dernier resort, to remove it by the
operation of tracheotomy. But whether or not, this
will prove successful, I am not prepared to say. It is
said to have proven unsuccessful, in the few instances
in which it has been tried; nevertheless, I think the
prospect of success which it offers, is sufficient to
warrant a farther trial of it. Such vigorous measures
have been opposed, upon the principle, that children

The first part of the manuscript is a list of names and places, written in a cursive hand. The text is somewhat faded and difficult to read, but appears to be a record of some kind. The list includes names such as "John", "Mary", and "James", and places like "London" and "Paris". The handwriting is elegant and consistent throughout the page.

could not sustain their operations; than which there is
nothing more erroneous, for it is a fact as well established
as any in medicine, that children recover from more
surgical operations and from the operations of active
medicines more speedily and certainly than adults.
Dr. Rush says they display an uncommon tenacity
of life and extraordinary recuperative powers, sur-
viving under circumstances which would destroy adults.
From these facts we are led to a very important prac-
tical conclusion and that is, never to despair of the
life of a child labouring under an acute disease;
but continue to administer to the restorative princi-
ple, as long as a vital spark remains.

